

## Iowa Power Fund Board Meeting September 10, 2008

### Iowa Green Corps

Q. Why has Louisa County not been incorporated in the program design?

A. There needs to be a housing base for volunteers, and the Green Corps members would be in the six stated counties as a primary. It will branch out into other counties.

Q. How trained will AmeriCorps members be?

A. They will be trained to work with community groups, but there will be a lot of on the job training.

Q. Who will be the host organizations?

A. A community action agency, governments, non-profits- Habitat, etc.

Q. Is there an agricultural component?

A. They could be consideration for agriculture, even though the members would be staffed in urban areas, more rural areas would be targeted as well.

Q. There have been several issues about design? **There could be some directive about design in the training, as that may be a portion of the project that is missing.**

A. That is why there was information included about Main Street program from the Department of Economic Development. To show that there are various programs at the state level that incorporate design.

Q. What is the timeline?

A. The full time members will come on in November, the half time in February. There is a lot of work already done; next spring is a time for reconstruction, there will be a lot of rebuilding work done.

Q. What is the plan for the Green Streets program?

A. The Due Diligence would need to see a new pre-app for Main Streets.

Yes- Fenton, Bilsten, Hubbell, Hemken, Norris, LaSeur, Higby

No-

Table-

Abstain: Leopold, Merrick

Negotiation Team: approved as is for contract

### Cornerstone BRAD-LLC

- Sioux County BRAD
- 11 one million gallon containers
- Producing pipeline quality natural gas
- Carbon dioxide
- US EPA 503A Class A Compost
- Organic Soil Amendment
- Pathogen Free Compost
- Marketable Greenhouse Gas Credits
- Methane 21x more harmful to the environment over CO2
- DNR permitting in place
- Construction in progress

- Completion June 2009
- AG Biosolids Identified
- Manure management options
- 50-75 jobs for community
- Over \$2.5 million in tax revenue
- There are several colleges that have been engaged to design courses to train workers in the bio-gas field
- There will be many internship opportunities at the facility
- Additional BRAD's would be developed throughout the State of Iowa
- \$2.5 million grant over a 3 year period
- \$5 million loan or guarantee provided there is a lender to participate
- Grant/loan assistance is necessary to provide funding for essential equipment
- For four weeks the plant has been shut down due to a lack of capitol
- Bridge financing is necessary to complete the project, but the rate is extremely high

Q. What is the ownership structure of the facility?

A. Bison Renewables own 51% of the BRAD; member owners own 49% of the plant. Bison manages the facility, and technology aspects.

Q. There are a couple permit questions, can the applicant elaborate?

A. The company has been in discussion with the City of Hull. The company was unaware of the permitting requirements. There was no awareness of the necessary lining for the facility.

Q. Some of the waste streams will be land-applied, are the nutrients that are applied to fields of less quality?

A. Their initial studies find that the waste product to be land applied is actually of higher quality than straight manure. Swine manure will be used, and the company is considering using poultry manure. Organic is much better than inorganic, which is less leachable.

Q. If the technology works, and there is a benefit to the producers, is there a marketable product? Is the price the same as natural gas? What if the carbon credit industry does not come to fruition in the next 5- 10 years?

A. There are many companies that want to purchase this gas. The company will use the NYMEX to price their gas. The company has built into their model at \$2.50 per metric ton. The Chicago Climate Exchange is currently selling credits for about \$3 per credit.

Q. Are there any long term contracts or buyers?

A. No, they have been advised not to, until closer to production.

Q. Has the corrosive nature been addressed in the biogas?

A. Yes, the company will remove all the sulfur, which is corrosive. Scrubbers will remove all corrosive parts.

Q. What is the natural gas price where the project cash flows?

A. There are many variables, transport, outputs, feedstocks, carbon credits, but \$4mm/btu, makes the project much less desirable.

Q. Are there many journal articles about the efficacy of this type of project?

A. Yes, there are university research studies on these processes.

Q. Is the heat rate higher with this project?

A. Yes

Q. Could the company work with transfer stations to use gain feedstock materials?

A. Yes. Where the Cornerstone BRAD exists, there are many towns that deal with the waste that is coming out the back end. The BRAD would like to use all of these waste by-products to produce biogas, and develop value added products.

Q. Is there other financial assistance from the State in this project?

A. There is some money from the Department of Economic Development, Sioux County, and TIF financing.

Q. How did the plant end up in this situation?

A. This is the first of its kind in the United States. There was a term sheet for \$12 million from a bank, but with the downturn of the economy the banks have pulled back their money. Material increases were huge, and some technology changes.

Q. The balance sheet shows \$38 million in equity?

A. The company has sold \$16.5 million shares at a dollar a share, and contributed \$4.3, and loaned the company \$5.3 million. The difference is in grant funding, and shares with strategic partners.

Q. If the money is raised, if the project is built, the company is proving a concept. If the BRAD is built, if project is economically viable, will this open the gate for digesters throughout the US?

A. Yes- there are 30 or so regional digesters in Europe. This is not a new concept. But, most have been on-farm. This is not experimental, this is not very risky, but it is new in the US.

Q. How much income will come from carbon credits?

A. About 10%.

Q. What are the market risks that could jeopardize this project?

A. Compressed and liquid natural gas can be generated from this plant, and there are significant markets for these products.

Q. How is this project different than E3 Biofuels?

A. Their boiler blew up because the biogas was not getting cleaned and the boilers were not calibrated to run on biogas.

Q. Is a loan guarantee still realistic?

A. Yes, they hope so.

It looks like the business needs \$10-20 million of capital.

**Yes- LaSeur, Leopold, Merrick, Wind, Fenton**

No- Higby,

**Table- Norris, Hemken, Bilsten, Hubbell**

- LaSeur would like to go forward contingent on the other financing- but more work needs to be done.
- Project is not perfect, but a good program. This is a fine next step to where we would like to be.

- The Power Fund Board will appoint a committee that will work with the company to craft a comfort letter that the company could use. IF the company is getting serious financing, the Board will move to reconsider.

### **Iowa Stored Energy Park**

- Stored energy park will store energy off peak, to use the energy during peak to save consumers millions of dollars.
- There has been economic and geologic research done, but now investors would like to see physical data.
- The project has been reviewed by Sandia National Lab.
- Now some wells are needed to be drilled, and there needs to be an assessment of the pumping ability into the geological formation.
- This project will help control costs of electricity
- Lowers emission generation
- Demonstrates Iowa as a leader
- Black and Veatch did a study which stated that the Iowa Stored Energy Park could potentially save Iowans \$100 million dollars per year.
- The Stored Energy Park could act as a consistent back-up to renewable energy.
- The Iowa Stored Energy Park would payback the money to the fund if successful.

Q. What is the amount of capacity ISEP would add to our economy?

A. The plant would be a 268mw plant. It's not a large plant, but it's a place to store energy for when it's needed. This is not a base load plant.

Q. How much wind is generated in Iowa today?

A. About 1500 mw.

Q. How much will the plant cost?

A. About \$240 million dollars.

Q. Will there be ancillary and spinning reserves?

A. Yes

Q. How much has the Department of Energy provided?

A. The DOE has provided \$1.5 million, which will yield about \$1 million once Sandia takes out their share. There have been earmarks for this project, not competitive grants.

Q. Is ISEP apart of the Iowa Association of Municipal Utilities?

A. ISEP is a 28E organization. The Board of Directors are directors of municipal utilities. There are 135 municipal utilities in Iowa.

Q. Is that \$33,000 per utility? Are they willing to put it in?

A. No there needs more vetting of the technology.

Henning: It seems that there is risk in this project because either as a taxpayer or utility payer there is risk for this project.

Q. Why is it more efficient to send wind to storage, as opposed to shutting down fossil fuel generation?

A. Fossil fuel generators take much more time and energy to cool down, which is very costly.

Q. Is there an agreement that if the research is proven, will the money be put up to prove this project?

A. No. There are more answers needed. There is still risk. There is no guarantee.

Q. Was there ever natural gas storage at this facility?

A. No, not as this depth.

**Yes- Higby, LaSeur, Leopold, Merrick, Hemken, Hubbell, Fenton**

No-Norris

Recusals- Wind and Bilsten

- This is a proof of concept, it is very important that
- This is a rebuttal to coal plants
- The idea is good, but if this project came out positive, there should be more investors in the project.
- With the price of a coal plant, this is competitive
- Norris-would vote yes with a 50/50 match
- Hemken, with funds for match from municipal utilities possibility \$1 million